

REMARKS

Claims 1-26 are pending in this application. In an Office Action mailed August 22, 2006 ("OA"), the Examiner rejected claims 1-26. In this response, Applicants add new claims 27 and 28. Applicants respectfully traverse the rejections and request reconsideration based on the following remarks.

In addition, Applicants do not necessarily agree with or acquiesce in the Examiner's characterization of the claims or the prior art, even if those characterizations are not addressed herein.

Reconsideration of the Final Office Action

To make a proper Final Office Action, the Examiner must provide a full and fair hearing regarding the claims. See MPEP § 706.07. Applicants respectfully request reconsideration of the Final Office Action on the basis that claims 2, 9, and 16 were not examined as amended in Applicants' last response.

In the response dated June 30, 2006, Applicants amended claims 2, 9, and 16 to depend from claims 6, 13, and 20, respectively. See Applicants' Response to Office Action dated June 30, 2006, at pages 2, 4, and 5. Claims 6, 13, and 20 in turn depend from claims 1, 8, and 15, respectively. Therefore, claims 2, 9, and 16 each contain all of the limitations of claims 1 and 6, 8 and 13, and 15 and 20, respectively.

In the OA, however, the Examiner appears not to have taken into consideration these claim amendments when examining at least claims 2, 9, and 16, and those that depend therefrom. For example, the Examiner rejected dependent claims 6, 13, and 20 as being unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 6,944,615 ("Teng") in view of U.S. Patent No. 6,507,853 ("Bamford") (see OA, ¶7), but rejected

claims 2, 4, 9, 11, 16, and 18 (which depend from 2, 9, and 16) as being unpatentable under 35 U.S.C. §103(a) over Teng in view of U.S. Patent No. 6,772,255 ("Daynes"). (OA, ¶6).

Applicants admit that the Remarks section of Applicants' response confusingly refers to claims 2, 9, and 16 as they were in their pre-amendment state. Applicants regret any confusion caused by this mistake. However, there is no indication from the Office action that the Examiner did not enter the amendments to the claims in the Amendment section. Therefore, the record technically reflects that Applicants' claims 2, 9, and 16 have been amended, but the amended claims have not been properly addressed by the Examiner in the Office action. For this reason, and to straighten out the record in this application, Applicants respectfully request that the Examiner withdraw the Final Office Action and examine these claims as amended.

However, to be fully responsive, Applicants will also respond herein to the other rejections in the final Office action.

Claim Rejections under 35 U.S.C. § 101

The Examiner rejected claims 1-7 and 15-21 under 35 U.S.C. § 101 alleging that these claims are directed to non-statutory subject matter. Applicants respectfully traverse the rejections and request reconsideration based on the following remarks.

Regarding claims 1-7, the Examiner stated that "[t]he claims are useful and concrete, but they fail to produce a tangible result because neither the function nor any results are stored in non-volatile media or, made tangible by being returned to the user." OA at pages 2-3. The Examiner further asserted "the claims are directed towards a

method for controlling access, however the limitations are directed towards abstract ideas that [do] not accomplish the method as stated in the preamble.” OA at page 3.

As noted by the Examiner, to be tangible, the claimed invention must produce a practical application or real world result. Applicants respectfully submit that the claimed invention produces a practical application because it is directed towards data archiving. In particular, the claimed process controls access to a data object when another program wants to read data in the process of being archived. The practical application is that, if the method did not perform the check to see if the data object's ID is contained in a lock object and is associated with a storage location prior to the accessing step, the data object could potentially be corrupted or lost. See Applicants' specification at pages 2-3, paragraphs 6-8. By claiming these steps, Applicants respectfully assert that claim 1 is providing a practical application or real world result because the method is preventing data objects from being corrupted or lost. Therefore, Applicants respectfully submit that claims 1-7 produce a tangible result and hence are statutory.

Regarding claims 15-21, the Examiner stated that “[claim 15] clearly recites a ‘machine readable medium’, which may comprise a ‘propagation medium.’” OA, , p. 3. Applicants respectfully suggest that the Examiner has misunderstood Applicants' specification. At pages 17-18, paragraph 56, the specification states that aspects of the invention can also be stored on “other types of computer readable media, such as secondary storage devices, for example, hard disks, floppy disks, or CD-ROM.” The paragraph continues on to refer to the “internet or other propagation medium,” but Applicants' specification does not state that a computer-readable media can include a propagation medium, as the Examiner erroneously suggests. OA, p. 3. In claims 15-

21, Applicants are claiming a functional computer program stored on a physical structure, which is statutory subject matter under 35 U.S.C. § 101. See MPEP 2106.IV.B.1.a (“Office personnel should treat the claim as a product claim. ”).

Claim Rejections under 35 U.S.C. § 102

In the final Office action, the Examiner maintains the rejections of claims 1, 3, 5, 8, 10, 12, 15, 17, and 19 under 35 U.S.C. § 102(e) as being anticipated by Teng. Applicants note with disappointment that the Examiner has repeated verbatim in this Office action the same arguments he made in the previous Office action, even though Applicants pointed out in their last response how the Examiner appears to ignore at least one element of independent claims 1, 8, and 15. While the Examiner claims to have fully considered Applicants’ arguments, the Examiner does not further clarify or provide additional insight into why Applicants’ arguments are not persuasive, not on pages 5-7 and not in the Examiner’s Response section on page 13.

As pointed out in the last response, each of claims 1, 8, and 15 recites “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location” (emphasis added). The Examiner did not point to any portion of Teng that teaches that in the first Office action and Applicants have explained why Teng does not. Applicants respectfully request that the Examiner provide a response or withdraw this rejection.

As explained before, Teng discloses a system for avoiding deadlock in a database. The system includes a lock manager 68 that limits access to a database 12 by requiring the system components obtain a lock on the target row or rows prior to

accessing the rows. The lock manager 68 ensures the integrity of the database by issuing locks based on lock compatibility to prevent multiple transactions from accessing the row(s) of the database simultaneously.

But Teng's system does not teach or disclose checking whether the ID is associated with a storage location. Teng is only concerned with checking whether the ID is contained in a lock object and does not disclose checking whether the ID is associated with a storage location.

By contrast, Applicants' claims 1, 8, and 15 each recite "checking ... whether ... the ID is associated with a storage location" For example, as shown in Figs. 1 and 4, the Applicants' system and method include the ability to check whether the ID is contained in an existing P-lock and check whether the ID is associated with an archive file (step 404). If the ID is not associated with an archive file, access is provided to the data object. This can limit the access of data within the data object to ensure that the data object has not been corrupted or lost.

In summary, Applicants respectfully submit that Teng fails to teach or suggest a computer-implemented method, as recited in claim 1, that includes "checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location" (emphasis added). For at least these reasons, Applicants respectfully submit that claim 1 is patentable over Teng.

Claims 3 and 5 are dependent upon claim 1 and are patentable for at least the same reasons as claim 1.

Further, regarding claim 3, the Examiner stated that Teng discloses "a transaction (column 7, lines 44-47) which contains a link to the target storage location, therefore the claim is in fact disclosed." The cited passage states:

As seen in lock table 204, at least information on the row identification ("RID"), the lock type ("Lock"), lock attributes ("Attributes"), and the transaction holding the lock ("Transaction") are recorded therein.

Id.

Upon reviewing the remaining portions of Teng, Applicant asserts that the transaction is an act to be performed. For example, Teng recites "[t]he delete transaction of the example instructs deletion of all rows for which C1=A." *Id.* at column 2, lines 51-52. Teng further describes this deletion transaction by stating:

The situation of FIG. 2(B) may evolve, for example, if the "Delete C1=A" transaction is an element of a composite transaction which also includes other transaction elements (not shown). In that case, an inability to carry out one or more other elements of the composite transaction would necessitate cancellation of the composite transaction including the Delete C1=A element. In a composite transaction, therefore, all transaction elements are typically committed only after every element has obtained the necessary locks, so that successful completion of the entire transaction is assured before the composite transaction elements are committed.

Id. at column 8, lines 1-12.

In other words, the transaction is limited to an act to be performed and not a link to the target storage location, as suggested by the Examiner. These portions cited by the Examiner and the remaining portions of Teng fail to disclose "the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID" (emphasis added). For at least these reasons, Applicants respectfully submit that claim 3 is patentable over Teng.

Claims 8, 10, and 12

Claim 8 is directed to a computer system comprising: “memory having program instructions; storage means for storing data; at least one processor to execute the program instructions to perform operations comprising: checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” As discussed above with respect to claim 1, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Claim 8 contains a similar element. Therefore, claim 8 is patentable over Teng for at least the same reasons as claim 1.

Claims 10 and 12 are dependent upon claim 8 and are patentable for at least the same reasons as claim 8. Further, claim 10 is similar in scope to claim 3 and is patentable for the same reasons provided above regarding claim 3.

Claims 15, 17, and 19

Claim 15 is directed to a computer-readable medium comprising: “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location..” As discussed above with respect to claim 1, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not

contained in the lock object or if the ID is not yet associated with a storage location.”

Claim 15 contains a similar element. Therefore, claim 15 is patentable over Teng for at least the same reasons as claim 1.

Claims 17 and 19 are dependent upon claim 15 and are patentable for at least the same reasons as claim 15. Further, claim 17 is similar in scope to claim 3 and is patentable for the same reasons provided above regarding claim 3.

Claim Rejections under 35 U.S.C. § 103

To establish a prima facie case of obviousness, MPEP § 2142 requires that (1) the prior art reference must teach or suggest all claimed elements, (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference, and (3) there must be a reasonable expectation of success.

Teng in view of Daynes

The Examiner rejected claims 2, 4, 9, 11, 16, 18 under 35 U.S.C. §103(a) as allegedly being unpatentable over Teng in view of Daynes. Applicant respectfully traverses the rejection of these claims.

Claims 2 and 4

Claims 2 and 4 depend on dependent claim 6, which depends on claim 1. Claim 1 recites “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Daynes fails to overcome the deficiencies of Teng regarding claim 1.

Daynes discloses a locking protocol, which provides access to a data object. But Daynes does not check, before accessing the data object, whether the ID is associated with a storage location. Therefore, Teng in view of Daynes fail to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 2 and 4 indirectly depend upon claim 1, claims 2 and 4 are patentable over Teng and Daynes for at least the same reasons as claim 1.

Further, claim 4 recites “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). The Examiner asserted that “[t]his claim is rejected on grounds corresponding to the arguments given above for rejected claim 3 and is similarly rejected.” OA at page 7. Because claim 4 is similar to claim 3, Applicants again assert that Teng fails to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). Daynes fails to overcome the deficiencies of Teng regarding claim 4 because Daynes does not provide a lock object including a table having a column for a link to the storage location associated with the ID. Therefore, Applicants respectfully submit that Teng and Daynes fail to teach or disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID.” For at least these reasons, Applicants respectfully submit that claim 4 is patentable over Teng in view of Daynes.

Furthermore, as noted above, the Examiner appears to have missed the amendment to claim 2 and has not established a *prima facie* case for obviousness for rejecting claims 2 and 4 based on Teng in view of both Daynes and Bamford.

Claims 9 and 11

Claims 9 and 11 depend on independent claim 13, which depends on claim 8. Claim 8 is directed to a computer system comprising: "memory having program instructions; storage means for storing data; at least one processor to execute the program instructions to perform operations comprising: checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location." As stated above, Teng fails to disclose "checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location." Daynes fails to overcome the deficiencies of Teng regarding claim 8. Therefore, Teng in view of Daynes fail to teach or disclose "checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location." Because claims 9 and 11 directly or indirectly depend upon claim 8, claims 9 and 11 are patentable over Teng and Daynes for at least the same reasons as claim 8.

Furthermore, claim 11 recites "the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,"

(emphasis added). The Examiner asserted that “[t]his claim is rejected on grounds corresponding to the arguments given above for rejected claim 3 and is similarly rejected.” OA at page 7. Because claim 11 is similar to claim 3, Applicants again assert that Teng fails to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). Daynes fails to overcome the deficiencies of Teng regarding claim 11 because Daynes does not provide a lock object including a table having a column for a link to the storage location associated with the ID. Therefore, Applicants respectfully submit that Teng and Daynes fail to teach or disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID.” For at least these reasons, Applicants respectfully submit that claim 11 is patentable over Teng in view of Daynes.

Furthermore, as noted above, the Examiner appears to have missed the amendment to claim 9 and has not established a *prima facie* case for obviousness for rejecting claims 9 and 11 based on Teng in view of both Daynes and Bamford.

Claims 16 and 18

Claims 16 and 18 depend on independent claim 20, which depends on claim 15. Claim 15 is directed to a computer-readable medium comprising: “*checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location..*” As discussed above with respect to claim 1, Teng fails to teach or disclose “*checking, before accessing the data object, whether the ID is contained in a lock object and the ID*

is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.”

Daynes fails to overcome the deficiencies of Teng regarding claim 15. Therefore, Teng in view of Daynes fail to teach or disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 16 and 18 directly or indirectly depend upon claim 15, claims 16 and 18 are patentable over Teng and Daynes for at least the same reasons as claim 15.

Furthermore, claim 18 recites “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). The Examiner asserted that “[t]his claim is rejected on grounds corresponding to the arguments given above for rejected claim 3 and is similarly rejected.” OA at page 7. Because claim 18 is similar to claim 3, Applicants again assert that Teng fails to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID,” (emphasis added). Daynes fails to overcome the deficiencies of Teng regarding claim 18 because Daynes does not provide a lock object including a table having a column for a link to the storage location associated with the ID. Therefore, Applicants respectfully submit that Teng and Daynes fail to disclose “the lock object comprises a table, having a column for the ID and a column for a link to the storage location associated with the ID.” For at least these reasons, Applicants respectfully submit that claim 18 is patentable over Teng in view of Daynes.

Furthermore, as noted above, the Examiner appears to have missed the amendment to claim 16 and has not established a *prima facie* case for obviousness for rejecting claims 16 and 18 based on Teng in view of both Daynes and Bamford.

Teng in view of Bamford

The Examiner rejected claims 6, 7, 13, 14, and 20-26 under 35 U.S.C. §103(a) as allegedly being unpatentable over Teng in view of Bamford.

Claims 6 and 7

Claims 6 and 7 depend upon claim 1. Claim 1 is directed to a computer implemented method comprising “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” As stated above, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Bamford fails to overcome the deficiencies of Teng regarding claim 1. Bamford is limited to transferring a lock along with a copy of a resource between multiple databases based on a command from a master database. Bamford is not concerned with “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Therefore, Teng in view of Bamford fail to disclose “checking, before

accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.”

Because claims 6 and 7 directly or indirectly depend upon claim 1, claims 6 and 7 are patentable over Teng and Bamford for at least the same reasons as claim 1.

Claims 13 and 14

Claims 13 and 14 depend upon claim 8. Claim 8 is directed to a computer system comprising: “memory having program instructions; storage means for storing data; at least one processor to execute the program instructions to perform operations comprising: checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” As stated above, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Bamford fails to overcome the deficiencies of Teng regarding claim 8. Therefore, Teng in view of Bamford fail to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 13 and 14 directly or indirectly depend upon claim 8, claims 13 and 14 are patentable over Teng and Bamford for at least the same reasons as claim 8.

Claims 20 and 21

Claims 20 and 21 depend upon claim 15. Claim 15 is directed to a computer-readable medium comprising: “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location..” As discussed above with respect to claim 1, Teng fails to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Bamford fails to overcome the deficiencies of Teng regarding claim 15. Therefore, Teng in view of Bamford fail to disclose “checking, before accessing the data object, whether the ID is contained in a lock object and the ID is associated with a storage location; and accessing the data object, if the ID is not contained in the lock object or if the ID is not yet associated with a storage location.” Because claims 20 and 21 directly or indirectly depend upon claim 15, claims 20 and 21 are patentable over Teng and Bamford for at least the same reasons as claim 15.

Claims 22-26

Claim 22 is directed to a memory for storing data, the memory comprising “a structure for controlling access to a data object having an identifier (ID), the structure comprising a first lock object, storing the ID of the data object and a link to a storage location where the data object is stored, and a second lock object storing the ID of the data object.”

Claim 22 includes a limitation similar to that provided in claim 3. As stated above, regarding claim 3, Teng's lock table 204 includes a RID, a Lock, Attributes, and a Transaction; none of which are a link to a storage location associated with the ID. As provided in the analysis above, the Examiner equates the link to a storage location to Teng's transaction, but the transaction is limited to an act to be performed and not a link to a storage location. Thus, Teng's transaction does not provide a link to a storage location associated with the ID. Regarding claim 22, Teng fails to disclose "a first lock object, storing the ID of the data object and a link to a storage location where the data object is stored" (emphasis added). Bamford fails to overcome the deficiencies of Teng. Thus, Teng in view of Bamford fail to disclose "a first lock object, storing the ID of the data object and a link to a storage location where the data object is stored."

Inter alia, Teng does not explicitly indicate "a second lock object." While, as the Examiner points out, Bamford refers to "a second lock object," Bamford does not teach or disclose a second lock object storing the ID of the data object.

For at least these reasons, Applicants respectfully submit that claim 22 is patentable over Teng in view of Bamford.

Claims 23-26 depend on claim 22 and are patentable for at least the same reasons as claim 22.

New Claims

New claims 27 and 28 are added.

New claim 27 is supported by Figure 7. Claim 27 is directed to a computer-implemented method including "selecting the data object having the ID; determining whether a transactional lock has been successfully set on the data object; determining

whether a permanent lock has been set on the data object based on the transactional lock being successfully set on the data object; granting read/write access to the data object based on the permanent lock not being set on the data object; and deleting the transactional lock.” The prior art of record fails to disclose this combination of elements. Therefore, claim 27 is patentable over the prior art of record.

New claim 28 is supported by Figure 3, and page 10, paragraph 36. Claim 28 is directed to a computer-implemented method including “selecting the data object; checking, before accessing the data object, whether the ID is contained in a permanent lock object, wherein the data object is scheduled to be archived if the data object’s ID is contained in the permanent lock object; and granting access to the data object if the ID is not contained in the permanent lock object.” The prior art of record fails to disclose this combination of elements. Therefore, claim 28 is patentable over the prior art of record.

CONCLUSION

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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